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EXAMINER

SERGENT, R

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 13

Application Number: 08/713,905

Filing Date: September 13, 1996

Appellant(s): Frank Richter

BAYER CORPORATION
For Appellant

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed
February 25, 1998.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

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(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 1-4 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *ClaimsAppealed*

A substantially correct copy of appealed claim 3 appears on page 15 of the Appendix to the appellant's brief. The minor errors are as follows: Within lines 1 and 2 of claim 3, the language, "2-(2)isocyanato-propoxy)-1-propyl isocyanate", should be "2-(2-isocyanato-propoxy)-1-propyl isocyanate".

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(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

1,3,267,122	Lehmann et al.	August 16, 1966
5,391,683	Joulak et al.	February 21, 1995
5,449,818	Biskup et al.	September 12, 1995
5,516,935	Bischof et al.	May 14, 1996

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner has not found support within the specification for the limitation of claim 3 pertaining to the hydrolyzable chlorine content. The disclosure within Example 1 and the comparative examples is not sufficient to provide support for the limitation. Furthermore, the statement within the comparative examples that the chlorine content was not below 0.1% cannot provide support for the content of the compositions of the instant invention.

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Despite appellants' argument, the position is taken that statements within the specification pertaining to the prior art and the hydrolyzable chlorine content of the prior art cannot provide support for claim limitations pertaining to the hydrolyzable chlorine content of the instant invention.

Furthermore, appellants' only disclosure of hydrolyzable chlorine contents for the instant invention stems from the examples; however, the disclosed amounts within the examples range from 24 ppm to 48 ppm. Therefore, it is unclear how a maximum of 0.0048 percent can adequately provide support for quantities approaching 0.1 percent.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehmann et al. ('122) in view of Joulak et al. ('683) or Biskup et al. ('818) or Bischof et al. ('935).

Lehmann et al. disclose the production of ether isocyanates by reacting phosgene with ether amines. See column 1, lines 42+.

Lehmann et al. are silent regarding conducting the process in the vapor phase; however, the secondary references disclose the phosgenation of diamines in the vapor phase with an attendant increase in yield, as compared to conventional phosgenation processes. Therefore, one of ordinary skill in the art seeking a method of producing ether isocyanates and improving yield would have been motivated to utilize the vapor phase phosgenation methods of the secondary references with the ether amines of Lehmann et al., so as to obtain ether isocyanates displaying greater purity and more economical processes.

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The examiner has considered the arguments made with respect to teachings of the primary and secondary references, and the position is taken that there are two issues to be addressed. The first issue is concerned with the specific diamines disclosed by Lehmann et al. The second issue deals with the selection of operating conditions (i.e., temperature) for the gas phase process, so as to prevent cleavage of the ether products.

With respect to the first issue. Appellants have argued that Lehmann et al. disclose a reliance on certain diamines. In response, appellants' claims clearly encompass the diamines of Lehmann et al. Since the instant claims do not exclude the compounds of Lehmann et al., the argument is considered to be without merit.

With respect to the second issue, appellants have argued that, based on the teachings of Lehmann et al., one would have expected the ether compounds of the process to cleave at the increased process temperatures used for the vapor phase phosgenation of the secondary references, and therefore, one would not have been motivated to utilize the vapor phase phosgenation of the secondary references to produce the ether isocyanates of the primary reference. In response, the examiner

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concedes that at increased temperatures (i.e., those exceeding the temperatures utilized by Lehmann et al. - about 170°C), one would have expected cleavage to occur. However, appellants' claims are not limited to the use of elevated temperatures; appellants' claims allow for temperatures as low as 50°C. Therefore, one of ordinary skill in the art would have been motivated by the teachings of Lehmann et al. to utilize temperatures up to about 170°C, and the position is taken that one of ordinary skill in the art would have reasonably expected the vapor phase phosgenation of the secondary references to proceed at the aforementioned reduced temperatures. Though the secondary references do not disclose the use of reduced temperatures, given the volatility of phosgene and the expectation that the phosgenation reaction would proceed regardless of phase at the reduced temperatures, one of ordinary skill in the art would have been motivated to utilize vapor phase phosgenation at reduced temperatures for the production of ether isocyanates having increased yield.

(11) Response to Argument

Appellants' arguments have been addressed within the "Grounds of Rejection".

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Rabon Sargent
RABON SERGENT
PRIMARY EXAMINER

Sargent:cb
May 11, 1998

ASD:eo
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